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THE
Historical and Scientific Society
OF MANITOBA.

TRANSACTION No. 25. SEASON 1886-7.

OUR WINTER BIRDS

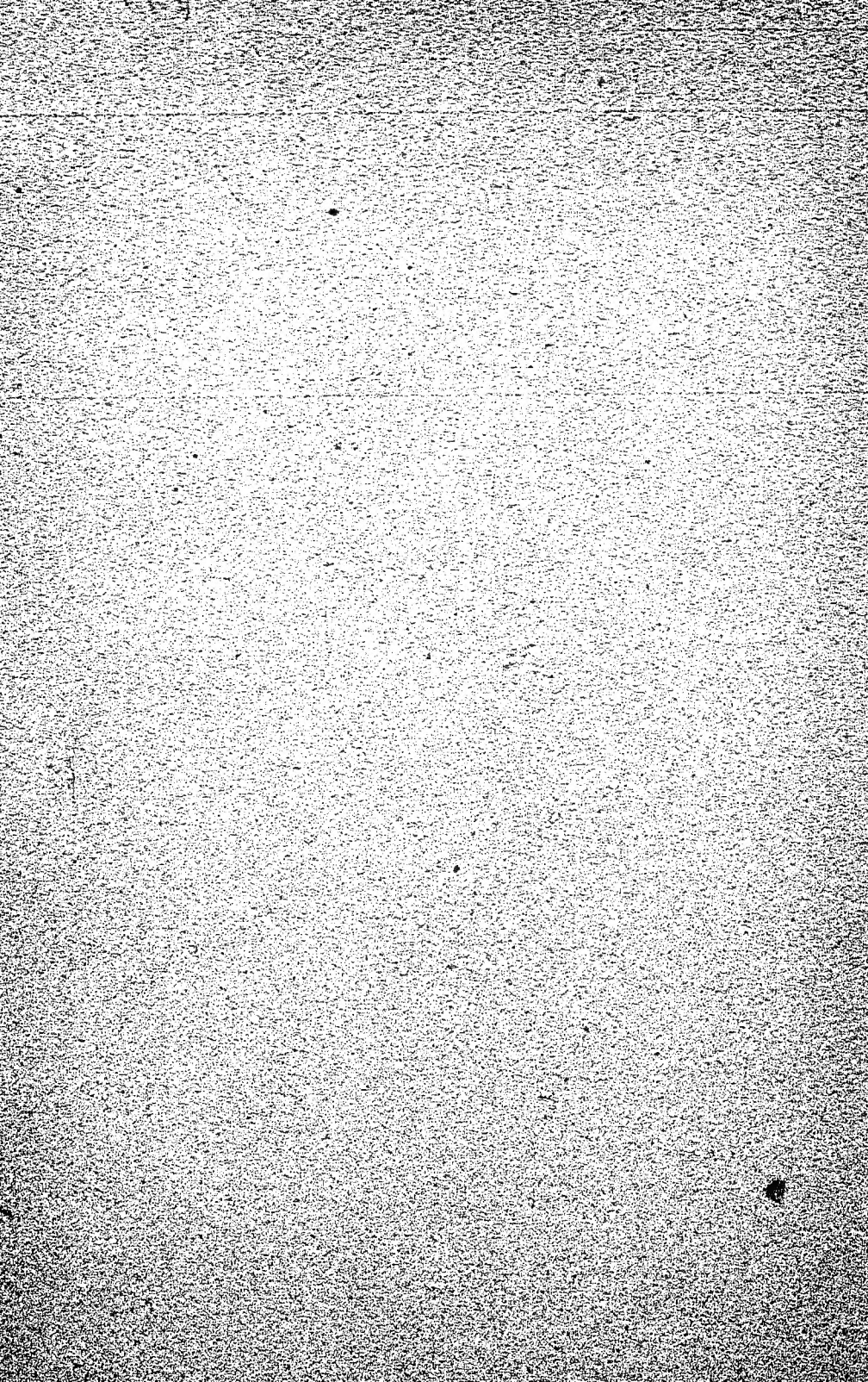
—BY—
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EX-PRESIDENT.

A PAPER READ BEFORE THE SOCIETY, JANUARY 27TH, 1887.

PRICE TWENTY FIVE CENTS

WINNIPEG.
THE MANITOBA PRINTING COMPANY, LIMITED.
1887.



OUR WINTER BIRDS.

January 27, 1887.

The following paper, by Mr. Alex. McArthur, ex president, was read at the last meeting of the Historical Society:—

This is an interesting subject for two reasons. It can easily be compassed, having very limited bounds as to locality and numbers, and because of the unusual conditions under which life is sustained. If our alphabet consisted of numerals we could by increasing it one half count all our winter birds. In none but northern winter climes is this the case. Were the subject extended to the ornithology of the whole year it would be the work of a lifetime to make as complete a list as we can now make of our winter birds after a few years observation. It is satisfactory to take up a subject the end of which is within sight,—and then we feel the winter birds are our own. Some never leave us in heat or cold and we know them all. We are not puzzled by intruding strangers whom we never saw before, and may not see again for many years. Our sympathies are enlisted, our interest engaged too in favor of our feathered fellow-winterers, when we consider that they have to brave it out at 40 below zero occasionally; that all the ordinary sources of sustenance are sealed up; that they have no open water to resort to either for insect life, or fish, or drink; that the parasitic life to be found in trees is frozen solid; that the earth is equally solid; that the air so full of life in summer is a desert to them in winter. The superficial English philosopher might be excused had he addressed to them his famous puzzle, "Is life worth living?" But he would be answered in the affirmative. Our sympathy is not wanted. Nature provides for the wants of all her dependents. They do not require water; they can support life without the food so essential to other birds, and they are amply secured against low temperatures, and they enjoy existence quite as much as their more volatile friends who seek southern quarters on the approach of winter.

One other phase of the subject gives it a temporary interest. It is virgin soil. The first attempt, so far as I know, to enumerate and classify the winter birds of Manitoba, or to describe their habits and the provisions of nature which enable them to live in and enjoy an atmosphere which would destroy 99 out of 100 of all birds the world over. While I will endeavor to treat the subject so that the novice may understand it, relegating all scientific names or terms

to an appendix,—it is necessary to be precise in order that ornithologists elsewhere may make intelligent use of my observations. The district over which my remarks extend is the valley of the Red River from the United States boundary line 49 to the north end of Lake Winnipeg, nearly 400 miles north and south and from the woods, 30 miles to the east of the Red River to the 98 deg. 15 min. parallel of longitude west of Greenwich or the vicinity of Portage la Prairie, nearly 100 miles east and west. In addition to the extra feathering of birds for winter, the small parasitic feather springing from the top of the open part of the quill particularly, nature affords other means of protection. One of the chief of these is the stores of fat accumulated in different parts of the body. In the case of the evening Grosbeak, a layer of fat is disposed all round the outside of the flesh. It resembles somewhat the covering of lard in which the minced meat or sausage is preserved. Other birds have the fat in reserve in the interior of the body, from whence, by means of the various organs, it is used to keep the fleshy parts up to a certain standard of heat. The partridge and grouse, as put on the table, show no fat, nothing but the leanest of lean meat; but the fat was in the inside of the bird, and served its purpose from there thence.

THE GOSHAWK.

We have only one representative of the falcon, the goshawk, but in point of interest he surpasses all others of his family, for he is the famous hunter, the trained and historic falcon without mention of which no tale of chivalry is complete. Ladies went to the field with the goshawk bedecked with ornaments perched on their wrists. How Sir Walter Scott revels in all the minutiae of falconry with its elaborate nomenclature and stately phraseology. To how many treaties of peace was the falcon hunt the seal and the immediate evidence. To how many tales does falconry lend its whole interest. With what grace does Boccaccio relate the entertainment of the Saladin by the Paduan Torello by means of a falcon hunt, and with what engaging sympathy does he tell the story of the poor gentleman, but ardent lover, who sacrifices his only remaining falcon and means of living, that his mistress may recover. Well trained falcons were more valuable than the best Arabian steeds. But the use of the falcon was not confined to Europe. We

are told of an Emperor of China who went out with his grand falconer and a thousand of inferior rank. The goshawk remains always with us. I have here a specimen of the male and female. You cannot help being struck with the great difference of the color of the sexes' plumage. An indifferent observer would be sure to think them different birds. You may see the goshawk any time of day on the borders of the woods, where he moves about picking up a livelihood. He hovers above the hare, compelling the timid little creature to keep his shelter until he is thoroughly starved. The grouse, too, keeps well within the thick brush when his shadow is near. The smaller birds are also on the watch for him, and have always a retreat in view in the thicket, where he cannot follow them except at the risk of his own life. He retires to the swamp as night comes on, and in his turn has to keep his weather eye open against a sudden freak of the larger owls who come out as he is disposed to sleep. He is a handsome and attractive bird with his brilliant rapidly moving red eye and erect observant attitude. He sails through the air in the most graceful way, one quick short flap of his wings sending him forward in a lounging easy fashion as if he were merely out for exercise—but watch him as he wheels round and allows himself to fall upon his victim. There is little lounging there. The female is of a light brown color with brown spots dropping at one end.

THE GOLDEN EAGLE.

In addition to the interest which the golden eagle inspires us with as the king of birds circumstances in my own case have made his study unusually attractive and valuable. I have been fortunate in being able to establish that the golden eagle breeds here and that he is a permanent resident; while I have had the unusual advantage of observing the bird from the nest up to maturity, or full plumage size and growth. The fact of breeding has been established by taking the young from the nest and their permanent presence by their being shot in mid winter. This is all the more satisfactory on account of the difficulty of observing the habits of the golden eagle in its wild state. Wilson says "its solitary habits, the vast inaccessible cliffs to which it usually retires united with the scarcity of the species in the regions inhabited by man all combine to render a knowledge of its manners difficult to be obtained." The birds I allude to were captured some distance up the Assiniboine in the days when steamboats of from 200 to 400 tons navigated that river to Fort Tally. A passenger on the Marquette, seeing a nest of unusual size high up in a tall, almost limbless, cotton-wood tree, offered to climb

up and get the eggs or capture the young. The captain put the head of the boat to the bank, and the volunteer quickly scaled the tree until his progress was arrested by the nest. Move as he would, he could neither get over it nor round it, and had to make an opening through the nest. One of the two occupants in its fright fell over the edge to the ground, and was secured by a man from the boat. After much time and hard work the opening was made large enough to pull the other bird through. The poor thing made frantic efforts to remain on its own side of the nest, extending its wings, clutching with its claws, and generally bracing itself against the remaining sticks. During all this time the old birds did not come within sight. The noise of escaping steam and the steam-whistle, to which they were no doubt strangers, very likely frightened them away. The steamboat had to go on to Fort Pelly, and it was fully ten days before the birds reached Winnipeg. Having an interest in these vessels the purser, who had become heir to the young eagles, made me a present of them. They were at this time perhaps about four or five weeks old: the hairy feathers had not disappeared altogether, and the outer ones were short, wide and round at the ends. They lay on the back of the wings loosely and without any regularity. There was nothing of the symmetry of the old bird about them. A shed 10x14, with wooden bars in front, was appropriated to their use and perches placed in it. They were fed refuse butchers' meat, fish (pike usually), with an occasional rabbit and scraps from the kitchen. I cannot at all confirm the common idea of their immense voracity, and am puzzled to account for the great difference between my observations and those of others. Hearne mentions two in captivity on the Hudson's Bay, which daily devoured a bushel of fish between them, and they are generally stated to be enormous eaters. So far mine have not exceeded an average of two pounds each per day of meat, and since the cold weather set in even this has been reduced. One whitefish weighing about 3½ lbs. will last a little over a day between them. I have been alarmed for their health, but they appear to keep in good condition. It may be that they partially hibernate and require but little food. They have been tempted with varieties of diet but all with the same result. They have had prairie chickens, ducks, rabbits, whitefish, jack fish, liver, and all kinds of meat, but they have always exhibited the same moderation. They ate the feathers of the fowl and the fur of the rabbit, but this is not from voracity but because these things seem to be necessary for digestion, for they are afterwards ejected

in round balls. Their food has been thawed out for them, but they eat so seldom that it nearly always freezes before they devour it. In the beginning of the cold weather water was supplied them as usual, but it always froze before they came near it. Of course, as they winter here they must be content with snow as a beverage if they require any, but my impression is that the moisture or liquid in their food supplies them with all they care for; at any rate, the snow furnished them seems for days untouched. They do not care for cooked food, and very seldom touch it. They have two perches, and the lower one, which is in the sun, is the favored one in daytime. A recess at the top of the cage, lined with tar paper, gives them a retreat where no wind can chill them, and to this they both retire at night. The door, of course, is left open but the place is small and the heat from their own bodies will help to keep them warm. It is at any rate a good deal warmer than any place they would be likely to select in their wild state. As they will only eat when completely alone, food has been placed in this retreat for them where no one can see them eat but it remains there even untouched for hours. Here they have experienced 50 below zero. When they are approached they open their bills wide, very much as young birds in the nest, when they expect to receive food and they now utter a scream or sharp cry more like that of an animal than a bird. They will not take any food from the hand however tempting and always move away when anything is put close to them. During a thunderstorm in their second year they began to shriek loud enough to be heard quite a long distance and continued this until the storm ceased. They did not repeat this during subsequent storms. If they are caught down on the floor eating they at once mount to their perches when any one comes in sight. They can be heard moving up before they are seen. They are easily frightened, and tremble when any great noise, such as hammering, is going on near them. They sometimes get angry and show it by shrieking very loudly and quickly. They are by no means cleanly in their habits, and often leave remains of food on their bills and talons; their feathers are never cleaned, and anything dirty that may get on them is allowed to remain there. This was the case when they had abundance of clean water every day in which to wash. I have never seen them preening their feathers, or in any way using either their bills or talons upon their bodies. They cannot at present be said to answer well to the grand descriptions given of the noblest of birds. The eye is, indeed, the only part of the body which gives one any

ideas of the grandeur of the full grown bird. It is brilliantly dark and its motion instantaneous with a piercing glance. The overhanging eyelid gives it a stern and determined appearance. The back of the head and neck is covered with loose ill-shaped feathers of a dull brown color (with a little dirty white). All the feathers are large and loose and do not lie smoothly on the wings, tail or body. The wing feathers are all particularly loose and look almost as if they were attached to the wing pretty much as they may be seen tied to the head of an Indian. The wings are about an inch shorter than the tail. The legs and feet are of enormous size and strength and are colored almost a bright yellow. The bill is also massive and strong, well shaped and is next the eye, the most striking feature in the bird's appearance. The bars of the cage are so wide that cats and even small dogs can enter in between them. They have hitherto done so with impunity, and have even abstracted food; but they will some day, no doubt, pay for it. The larger dogs put in their paws and try to steal food, and so far the eagles have done nothing to restrain them or to remove the food beyond their reach. The only animals to which they have shown any resentment were a couple of pigs, who were sniffing about the foot of the bars, when their backs were suddenly touched by the talons of the eagles. They were more frightened than hurt, but they did not cease squealing or running until they were a long distance off; and they have never repeated their visit. They offer no resistance when once they are in one's hands. They remain quiet, but frightened. A slight pressure of the knee against their wings keeps them up to the side of the cage while the floor is being cleaned. On one occasion while putting up a new perch one of them managed to effect his escape. He hobbled a short distance across the garden, using his wings more on the ground than in the air. When he got this length he looked back, wondering why his companion was not coming. Picking up an old sack to put over his talons or beak should he show a disposition to use either, I followed him. He looked longingly at a poplar tree not far off, as if measuring the distance for a flight, but then looked back again at the cage. As I got close to him he moved off in another direction, and at last rose about five feet from the ground to clear a pile of wood, and landed about fifty feet on the other side. Here he remained and allowed me, while he was looking back again, to seize him quite easily, making no resistance. Had he only known the power of those wings of his he would have meditated over his mate's delay on the top of a tree instead of the ground. The wings at present measure six feet across,

The foregoing remarks were written when the birds had been a little over six months old. I retained them for nearly three years longer, but there is not much to add to what I have said. They increased in size until they were two years old when further growth became almost imperceptible. They had improved in shape until they attained the well proportioned figure of the mature bird. The feathers became regular, lying close to the body, and the plumage became rich in color—a dark brown with a light shade on breast and belly and under the tail. They cast off their feathers all the time without observing a moulting season. They still maintain their moderate appetite. The few efforts I made to tame them were ineffectual and to the last they remained stern and defiant.

I will not add to this long notice by giving the history of the golden eagle, for it is familiar to most of us. We all know that by some nations he was held sacred, and that the quill and tail feathers are still highly prized by savage tribes; that he is still used in Northern Asia as the falcon is used; that they often carry lambs to the young in their eyries; that they have been known in various countries to even seize upon infants and carry them off, and that in Scotland two children which an eagle had captured and placed before its young for a meal, were rescued unharmed. All this, however, we are apt to forget as we gaze upon the imposing and majestic figure of the king of birds with his brilliant piercing eye; his grand head and strong clean limbs ending in those well shaped but cruel talons. Our admiration is increased when we observe him ascending the heavens until we lose him in space or floating in mid-air, his wings expanded to their full width and used so slightly as to make the motion almost invisible. The goshawk may out-do him in speed but in the perfect grace of movement no bird comes near him.

Although a bird of prey with a proud untameable spirit and charged with fierce voracity he has one amiable characteristic, rare among birds and which he shares with that emblem of peace and good will and constancy, the messenger of good tidings and a restored world, the gentle and pretty dove. When the eagle selects a mate it is for life, a life which may extend over a hundred years for in captivity the golden eagle has attained to over that age.

When Wilson wrote the young of this bird was thought to be a different variety and was called the ring-tailed eagle but investigation it is said showed the fallacy of that idea. My observations do not confirm this as there has been no ring at any time on those I brought up.

The following information has just been

received from Mr. Bedson: Length, 25 $\frac{1}{2}$ in.; tip to tip of wings, 6 feet; height, 24 in.; wing, 18 in.; tail, 19 in.; wings beyond tail, 6 in.; width of largest feather, 2 in.; plumage brownish black; no ring on tail at any time; no difference between summer and winter plumage; no parasitic feathers; eyes black, dark yellow rim; talons black, legs lemon yellow. They are voracious and partake frequently of water. Are tame with attendant only. Agree with vultures and owls, wild geese, ducks, etc., caged beside them failed to bring out their wild instincts.

OWLS.

We have, during winter, more varieties of the owl than of any other bird. All are hardy, densely feathered, furred to their claws, and in every respect well calculated outwardly to contend with cold and wind. At 40 below zero he shows none of the hurry of the pedestrian, but may be noticed lounging through the air or perched on a decayed tree as in the mildest weather. That briskness of movement which a low temperature impels others to adopt he disdains. Nothing but the sight of a prairie chicken, mouse or other favorite morsel will induce him to give up his dignified inactivity. He is not easily moved from his perch, but will wait until you get very near him. Even then he expands his wings slowly and turns his back on you in an easy, leisurely, indifferent style. His flight is, however, only seemingly slow. His wings expand to an immense width, and he soon leaves a long space between himself and his disturber. Sometimes he does not exert himself much; he is gorged or sleepy, and merely wings his way to the nearest post or tree, and there stays until driven away again or shot. The whole plumage of this remarkable species differs much from that of other birds. Indeed it is a study in itself. Next to the body in winter is a mass of feathers so downy, so excessively fine that it may be touched without being felt. In the Snowy Owl it is very long and fluffy and whiter than the whitest snow. The ring round the eye consists of fine unwebbed feathers, and the outer edge of the ear has a semi-circle almost of a smooth, narrow, velvety kind, the fibres of which are so exquisitely fine as to be invisible to the naked eye. Nature, too, has taken every pains to adapt its feathers and wings to its peculiar manner of life. The noise which other birds make in cleaving the air, the owl is enabled to avoid by the delicacy of its plumage. The wing especially is guarded where it strikes the air and some of the primary feathers on the outer edge instead of being webbed the whole way terminate in fine hair-like points. The legs are doubly protected, being covered with short furry feathers, while from the

body spring long feathers which come down loosely over the leg to the claws. The cry of the owl is dismal and doleful; indeed all birds of prey, as well as animals have a coarse disagreeable cry, as if nature wished to give every chance of escape to their intended victims. The poets taking advantage of this and its nocturnal habits introduce it to add horror to the scene or to strike terror to the heart of the criminal. Owls moult when the young are getting their feathers. The owl swallows feathers and fur ejecting them afterwards. It goes through a process somewhat like that of chewing the cud.

THE SNOWY OWL.

Perhaps the most beautiful of all our owls. The male has a few black spots which in the female are much increased. They are much in demand for mounting. I had the pleasure of seeing one last night which was pure white with the exception of a few black spots on the tail, but barely visible outwardly. It is not a nocturnal bird as it comes out only after daylight roosting during the brightest part of the day and coming out again as the shadows are lengthening. It is a migratory bird here, arriving from the north about the end of September and leaving again in April. I am unable, therefore, to describe its eggs, never having seen them, but they are said to be 6 or 7 in number and of a dirty white color. It is common to both continents and delights in a northern climate. Its food consists in winter of rabbits, partridges, mice, etc., and it adds fish to this diet in summer sitting on the rocks watching for the fish rising to the surface. The cry of the snowy owl is very weird and uncanny, and the traveller in the woods never gets so used to it that he can hear its unearthly scream without a shudder. Pennant says it adds horror even to the desolation of Greenland. The female is much the largest in size.

THE GREAT HORNED OWL.

The great horned owl is to be found in deep, dark swamps, and its whereabouts may be ascertained by noting where its peculiar cry comes from. Wilson translates this cry as *waugh-oh! waugh-oh!* and he is as nearly correct as possible. But it has another cry, and anyone hearing it will never forget it. After the camp is at rest and the fire is dying away, and the traveller has composed himself to sleep, and is already drowsy, he fancies he hears one of his fellow-travellers in distress. Rousing himself up he notices that the noise is further off, but still that of a person struggling for life, in fact suffocating. The next time he can discern the cry to be that of the great horned owl, and there was no murder save that of sleep. The food of all owls is

pretty much alike, but this variety will not touch other food if he gets rabbits and partridges. He often pays midnight visits to the farmyard, and if any access can be had to the chickens' roost, he fares sumptuously every night. The nimble squirrel is sometimes not quick enough for him as he descends noiselessly upon him, while the victim is too intent on securing his fibert. The eggs are two to four in number of a pure white color. It is not migratory and resides summer and winter with us. In confinement, if left without proper food they do not hesitate to emulate some Arctic travellers in distress and eat each other. Its flight is like that of the Snowy owl.

THE GREY OR BARRED.

Of this owl which remains here the year round there is not much to be said as its habits are similar to those of the great horned owl. It is essentially a nocturnal bird, although strictly speaking night is an inappropriate word to apply to owls, for during the night they roost as other birds do. They really emerge with the earliest streak of dawn to seek for their food and retire as the sun approaches the horizon; they then seek the gloomy recesses of the forest always selecting unapproachable swamps; they again emerge soon after sunset and they may be seen lazily sailing along as if out for a stroll in the glooming, but carrying the silence of the deep dark woods with them. Few travellers can so accustom themselves to the habits of this bird, as not to be startled when an owl, all of a sudden, passes close over head, without the slightest sound to indicate his approach. The owl is the cat of the air, with its silent motion and sly but sure descent upon its victim. The grey or barred owl is of a tawny gray color. It lays five eggs of a clear white color. The female is much the largest, but in color is much the same as the male.

GREAT GREY OR CUMEROUS OWL.

This is not a migratory bird, remaining with us the year round. Its habits and food are so much like the two already described that I need only speak of its appearance. It seems a large bird, but this is only with regard to its plumage, which is even finer, softer and fuller than that of other owls. Its body is really very small. Its finer feathers enables it to fly more noiselessly than the other varieties, if that were possible. It has a small eye. Its cry is similar to the hoot of the great horned. It frequents the deepest woods and darkest ravines, and lays 5 eggs. It is not to be found far south of here.

THE HAWK OWL.

As its name implies, the hawk owl has

somewhat of the hawk in its appearance, resembling it in its smaller head, narrow face and long tail. The beak, too, has more of a horny color than other owls. It has the daylight habits, too, of the hawk. The range of this owl is very extensive, ranging from the arctic islands to the far south. The female is darker in color, as well as larger, than the male, and lays four eggs. It is a very common bird here.

THE LONG EARED.

This owl is also abroad during daylight, when it roams on the outskirts of the woods ready to pounce on stray rabbits, partridges or mice. It lays four eggs of a pure white and has the habit of laying its eggs in the discarded nests of other birds. When disturbed all owls give a snap with their horny bills with so much suddenness as to make the visitor hastily withdraw his hand from the cage. The so-called ears consist of six feathers each, three black bordered in front and three shorter brown ones behind.

THE LEAST OWL.

Wilson, who has never been excelled in description, says of this owl that it is neat in color and size and shapely in appearance, altogether the most attractive of its family. It does not fly at high game, but contents itself with a delicate morsel such as the wee timorous mouse, in catching which it is much more dexterous than its larger relations. I have been asked where it gets the mice. Here is a singular exposition of the economy of nature. Mice abound everywhere, even up to the extreme north, where not satisfied with reaching the most northerly known coast, they stretch away towards the north pole on the ice until they have the distinguished honor of approaching nearer that undiscovered spot than any known quadruped or even any living thing. Captain Markham found the little cunning Arctic mouse on the ever frozen sea miles away from the nearest shore. One Arctic explorer found traces in one short path of thousands of these little animals. At any suburban dwelling after a fall of snow the footprints of mice will be found all round the house, and these can be traced to small holes in the snow amongst the bush or under trees. They burrow through the snow finding food in all directions where the owls could not go, and taking it into their little bodies, they thus supply the owl with food from sources which the owl could not reach and it is all the daintier for being converted into mice meat. Such is nature's system of parasitic existence. This owl builds its nest in the spruce trees where it can get them, and lays two small eggs, prettily colored. It flies very low and perches often on the lower limbs of trees,

where it sits silently, motionless, much like a cat until the unsuspecting mouse appears at its hole, when the watcher falls mercilessly, and as quick as lightning, upon its prey.

TERGMALM'S OWL.

Of this owl I have little to say, having seldom seen it, although it is to be found in our woods and wilds. I have never seen the eggs, and cannot say how many it lays, or of what color. It is much like the least owl, but darker and larger. It is migratory, but breeds here. This must be its southerly limit, as it is very scarce some winters. None have been seen this winter. It is sometimes called the Labrador owl. The male and female are alike. It is very tame, and will eat from the hand in a day or two. The lightning-like descent of the owl on its prey can be seen by tying a string round a mouse and pulling it across a table. It is utterly impossible, no matter how quickly you may pull the string, to get it off the table before the owl seizes it, and, like the sportsman, it aims ahead of the object. The owl may be placed at the edge of the table, say four or five feet away.

WOODPECKERS.

We come now to the woodpecker, a species of bird of which we have a number of varieties wintering here, although in habits and constitution quite dissimilar to the owls. It follows that their food must also be of a different kind and that they must find it by means quite dissimilar to the voracious owls. The woodpeckers are much smaller although some varieties are considerably larger than the largest of what are called the small birds. They are distinguished by their brilliant colors often rather loud but still attractive and lending to the wintry landscape a warm tint and a gay appearance. The rapidity of their movements arrests and interests the observer. Altogether they are quite an addition to the attractions of a grove, and the occupants of country or suburban houses should use every possible means to protect them and ensure its continuance in their neighborhood.

No bird can boast of being more useful to nature or man than the woodpecker, and it is too bad that senseless so-called sportsmen should be allowed to wantonly destroy them. The neighboring state of Minnesota now numbers her orchards by the thousand, and there can be no reason why Manitoba should not some day do the same by adopting the same means which experience has taught our friends across the line to use. The woodpecker is indispensable to an orchard for without it the apple tree would be fairly eaten up. But the

woodpecker is useful even now for without his aid the beautiful plums which our woods afford would never come to fruition and ripeness. The wild cherry which reaches such perfection in the Qu'Appelle valley would be deprived of the sap which enables it to ripen if the woodpecker did not clear the tree of the grubs which infest it. In the severest cold this wonderfully formed bird attacks the frozen tree and giving blow upon blow, ceases not until the larvæ are exposed to view, only to disappear in the beak of the industrious little thing which has so well earned its meal. Nature duly provides this bird with all the appliances necessary for its peculiar mode of existence. Instead of three claws two in front and one behind, most varieties are furnished with four toes, two in front and two behind, and the latter are considerably the longest. As it often has to work on a perpendicular tree, and has to bear its body in an upright position, these hind toes enable it to keep this attitude even when the bird is delivering blow after blow on the hard bark and wood. As a farther security against overbalancing itself, its tail feathers have the quill-shaft running "down to a strong, sharp point. Even the wing feathers at the extremities end in the same way, all being used to support the body when engaged in obtaining food. But these are exceptions to the four-clawed rule, more than one variety having only three toes. So well adapted are these claws to the work they perform that while a spark of life remains the bird can cling to the tree even with one toe.

The bill is of unusual size and strength. Although the point does not look very keen, examination will show that each mandible is sharpened in a peculiar fashion and separated at the extremity, so that each makes a distinct mark on the wood, the space left between being then more easily removed; the neck is unusually strengthened to bear the strain of continual blows; the membrane around the brain is also thickened to prevent danger from the continuous concussions following each blow.

The woodpecker usually lays five or six eggs. The female is smaller than the male, and is not so brilliantly colored.

Its cry is not pleasant, being shrill, shaky and strong, but there is somewhat of sociality in its chuck! chuck!

The tongue is studded with barbs, and as it can be protruded from an inch to an inch and half, these serve to attack secluded worms or insects and draw them from their lurking places.

Their nests are dug out of trees running in a short way and then down to 12 inches. Sometimes this labor is lightened by selecting a decaying tree, and sometimes dispensed with altogether by using the nest

of an owl. The aperture is just large enough to permit the bird to enter, but at the bottom it is formed into the shape of the inside of a nest. How it manages to keep the nest clean is a wonder. The interior walls of the passage and nest are chiseled and polished until quite smooth. Some woodpeckers take the trouble to carry the chips away to prevent the detection of the nest. Others leave the chips where they fall. I discovered a nest in this way on the banks of the Winnipeg River. Although the ice had moved, there were heavy drifts of snow underneath the projecting banks. On the smooth surface of the pure snow I noticed, a short way off, a stain that seemed like a small handful of dust. No tracks were near, and there was a distance of several feet between it and the nearest rocks. I was puzzled for a moment to account for the presence of the sawdust, until looking up I saw an overhanging tree, with a small round hole half-way up to the lowest branches on it. This was the 12th of May. The Winnipeg River is almost ten days later in freezing over, and the same time later in opening, than the Red River. Wilson observes that they begin making their nests in Pennsylvania in the middle of May; so that our woodpeckers are actually rather earlier than the more southern ones. These birds have a wide range, some varieties being found as far south as Philadelphia in winter. We have as many as four and perhaps five varieties, but as their habits are much alike I will merely describe the points in which they differ from each other. They have a hovering up and down sort of flight.

THE HAIRY WOODPECKER.

This bird gets its name from the fact that the feathers are not closely webbed, the plumage is black and white. It remains here summer and winter.

LITTLE DOWNY WOODPECKER.

This is the smallest of all the woodpeckers. In plumage—that is in color, tints and markings—it is exactly like its larger relation, the hairy woodpecker. Indeed, size alone outwardly is the only difference between them. It suffers from the impudence of the wren. That little insignificant but militant creature actually attacks the little downy, succeeding often in driving it away and then occupying its nest. Its eggs (six in number) are a pure white, and of all the family it is much the most successful in destroying the insect life in trees. It makes a most thorough and exhaustive examination of each tree and does not retire until the last grub is unearthed. The south side of some trees (the sunnyside on which the eggs are always deposited) can be seen with hundreds of small round holes excavated by those industrious small fry.

It has a wide range being found in Pennsylvania where it remains all winter.

PILLIATED WOODPECKER.

This variety has also a wide range, being found in Pennsylvania where it breeds. It may be seen in companies of two or three, and may be distinguished from the other varieties by the greater brilliancy of its movements. Its eggs are snowy white.

Its plumage is a bright scarlet on the head and a scarlet patch on jaws. The female's head is a light brown color. Its eggs, six in number, are a snowy white. The feathers are close.

THE THREE-TOED WOODPECKER

Is a permanent bird with us. It lays four or five eggs, a brilliant white. Although having only three toes it is in all respects similar to the others in habits, cries, etc. The plumage is very striking, the upper part dark, glossy, blue-black, the breast white and the crown of the head yellow. The female wants the yellow on the head.

PARTRIDGE AND GROUSE.

These possess the special interest of being the only game birds remaining with us all winter. We see little that is peculiar in them as the domestic hen accustoms us to many of their habits. But as the partridge is more of a forest bird, and the grouse one of the plains, and their habits differ accordingly, it is necessary to treat of them separately.

THE WILLOW OR WHITE PTARMIGAN.

This is the ptarmigan of the arctic region, where it is to be found in immense flocks. It is the only one of the partridge-grouse family that does not remain with us all the year. It is a rare winter visitor even, and never more than a pair are seen together. It is interesting to find that being essentially an Arctic bird, its southern limit in this latitude cuts almost through this city, and it is the only Arctic bird which does not go further south in winter. It has never, so far as I can learn, been seen to the south of us, and I have met with sportsmen, old residents, who have never seen one. Bird's Hill, near which 50th parallel passes, is the most southerly point at which the white ptarmigan has been seen. Its winter plumage is as white as the driven snow, save the tips of the tail feathers, which are a jet black. In summer it molts to a brown color. It moves to the south end of Lake Winnipeg about the end of November, and leaves with the first symptoms of milder weather. It is furred to the toes. It is a better flyer than any of the other varieties, and its flight is light and graceful. When shot at it dives into the snow with a speed which, with its white coat, renders it almost invisible. There is

no use looking for it: it may be a hundred yards away. Like all partridges and grouse, it nests on the ground, laying from 8 to 16 eggs. It is of great utility as food in the far north, the Hudson's Bay people killing thousands for winter use; 10,000 were consumed at Severn in one winter, and whalers detained in the ice have saved their lives by means of their flesh. Hearne mentions thousands as having been consumed at some post to his knowledge. Parry found them on his second voyage in 66 deg., 51 min. on the 30th October, and up to the 22nd April. Richardson says they are more in motion in the milder light of night. Of those killed by Parry, one weighed 1 lb. 14 oz; 26 averaged 1 lb. 8 oz in January. It is caught in traps of various kinds, being very tame and very stupid.

THE DARK OR SPRUCE PARTRIDGE.

This variety differs from others in having 20 broad feathers in its tail, which is rather rounded. The cock of the plains is the only one similar in this respect. These feathers are black. It eats the pine and spruce leaves, cone seeds and juniper berries. The feathers are black and grey. It frequents the spruce woods. The flesh tastes of the leaves of the spruce in the spring and is not pleasant.

THE RUFFLED, BROWN OR DRUMMING GROUSE.

This is found only in the woods and it has more affinity for perching than other varieties. It is very plentiful in the woods along the valley of the Winnipeg River, and is so tame that it can be knocked down with a stick. In the pairing season however it becomes bold and wary. The male struts about with all the dignity of partially extended wings and wide-spread tail. He will dare any rival to combat and the encounters at this season are in deadly earnest. The drumming sound is produced by stiffening his wings and throwing them out somewhat from the body but in such a way that they present to the sides of the bird a concave surface, which being brought rapidly against the side of the bird encloses the air and then the noise of this compression is called the drumming. In the meantime the bird struts from end to end of a decayed log, challenging the admiration of the fair sex within sight or hearing. But the drumming is not confined to the season of love-making, for I have heard it at almost all times of the year. The flesh of this bird is not considered good eating, particularly in spring, when its diet consists so much of the spruce tops and leaves. It roosts sometimes on the trees.

THE PRAIRIE CHICKEN OR SHARP TAILED GROUSE.

This is the best known bird of this class, as it is met with all over our prairies and is

the one we usually see at table. It is now in this district wild and wary, the settlement of the country making its pursuit so much more frequent than in olden days. No one can mistake this for any other variety as the sharp pointed tail at once identifies it. Its flesh is tenderest and sweetest when it lives on the ripe red haw of the prairie rose. It frequents grain fields after the crop is harvested and when ploughing is going on, and in the early morning before any one is stirring it comes round the stack yard having time to fill its capacious crop before being disturbed. It is not to be found far south of here. It breeds on the ground, the nest being of grasses with a lining of feathers. It lays from 9 to 13 eggs of white color with black spots. The young remain with the mother until the following season, but it is now rare to see a brood complete. Large numbers are brought to the Winnipeg market. Pot-hunters scour the country in light wagons, carrying a dog, and, going systematically about it, sweep the country clear before them. The prairie chicken sits on the ground during the night, forming a circle, with tails to the centre and heads out, thus keeping watch at all points of the compass. If there is no settler to disturb them they will allow the hunter to come very close indeed, and no doubt in most cases they escape his eye; but they see the dog from afar, and rise long before the sportsman is within gunshot. Since they are so much hunted they have taken more to bluffs of poplar, where they have less chance of detection and a better chance of escape, as they at one bound place trunks and limbs of trees between themselves and the enemy.

PINNATED GROUSE.

When I read a brief paper on this subject some years ago, I made no mention of this variety of grouse, and for the very good reason that I had never seen the pinnated grouse in Manitoba. It was common and on the prairies of Illinois and to be found all the way up to St. Paul. It is now quite common here, and threatens soon to dispute the possession of the plains with its more homely cousin, the prairie chicken. The reason for its rather sudden appearance and rapid increase seems to be that it has followed the wheat fields. In my earlier journeys to this country I have passed over large tracts in northern Minnesota and Dakota on which no one was settled. One stretch in Dakota on the west side of the Red River of 140 miles of the most fruitful soil in the world, did not contain a single settler or dwelling, and twenty or thirty miles in Minnesota was a common distance between houses. Now these rolling and level prairies are thickly settled, and there is a continuous wheat

growth, field touching field almost the whole way from Illinois. Possessing no great powers of flight, this bird did not care to wander far from its base of supplies in quest of fresh fields and pastures new; but now it can find its favorite grain everywhere. The pinnated grouse is so called because of the pendant feathers on the neck. It has a mark by which it can easily be identified. A large spot of a deep orange color is on each side of its neck. It forms part of the crop and appears to be left bare to prevent the grain from heating in summer. In winter this shrinks and shrivels up until the feathers meet again so that this part is not left exposed to the excessive cold of winter. This and the preceding bird delight in the mazes of the quadrille or some other such dance, through the evolutions of which they may be seen gravely bowing to partners and so on.

THE RAVEN.

This bird of ill omen is one of the most widely scattered of the feathered race. From the glaciers of Greenland to the coral reefs of the Pacific, from Nookta Sound to Norway and from Norway to Kamischatka, from the Cape of Good Hope to Gibraltar, the raven is an object familiar to man; ever the same changing neither with clime or season. No bird enters so largely into literature or is so effective in the hands of the poet. His carnivorous habits, his hoarse cry, and his densely black plumage, point him out as a foreboder of evil and omen of ill. From Shakespeare to Poe the raven has been associated with deeds of darkness and mysterious forebodings. "The raven himself is hoarse that croaks the fatal entrance of Duncan under my battlements" says Macbeth, and in Othello he is represented as hovering over the infected house. The history of the raven is co-eval with that of man, and in Scripture he is often alluded to. He did not return to the ark, no doubt finding abundance of food where the dove would starve. The prophet's life by the brook Cherith was sustained by the raven, and Solomon describes locks as bushy and black as the raven. The young raven was given as an instance of God's providence: "Who provideth for the raven his food when his young ones cry unto God." And again, "The eye that mocketh at his father and refuseth to obey his mother, the raven of the valley shall pick it out." Isaiah draws from his vast knowledge and in copious but simple diction, and in one line, draws a picture of ruin and desolation such as has never been surpassed, and in which the raven figures. "The cormorant and bittern shall possess it; the owl also and the raven shall dwell in it." The ancient Romans consecrated the bird to Appollo, and frequent mention is made of its appearance on

important occasions. There is great similarity in the name of the raven in different countries. Even in Sanscrit it is karava. It has given several words to the English language. Raven as a verb, raven (as raven locks), ravenous, and ravish. It attains a great age, and thrives in captivity, becoming quite domesticated, and affords infinite amusement by its pranks, cunning and thievish propensities. They usually go in pairs. Its flight is graceful, the wings moving in two sweeping curves, and when necessary it flies with great rapidity. Anyone can tell the difference between the raven and the crow when in the air, no matter how far off, by the continuous short flapping of the crow's wings. It is disliked by all the other birds, who usually give it a wide berth. It is seldom seen where there are any crows, and it is supposed to drive them out. As to food, it is carnivorous, eating fruit, corn, fish, insects, birds and animals, the latter either fresh or as carrion. It seizes a shell fish and rising up in the air lets it drop on the rocks and so gets at the contents. It follows the hunters on the plains sure of abundance when the buffalo is plentiful, and further north it follows herds of musk-ox and reindeer; it attends too at fishing stations. They use all their boldness, cunning and dexterity in procuring food. The Canada jay for instance steals the bait out of the trap, but the raven waits until some of the smaller animals abstract and eat the bait when it pounces down and devours both. With us the raven is only a winterer, coming here after the cold has set in well, and leaving before the crows arrive in spring. They are not at any time numerous here, and I have seen none near the city for some years. Four or five years ago a few made the spruce clump beyond Birds' Hill their home, and every morning they came across the Red river below St. John's cathedral on their way to the abattoirs. I never saw them returning, and fancy they must have gone back about noon. I saw one so intent on a bone one day that I could have caught it. The bone, evidently just thrown out, contained the marrow still unfrozen at one end, and it was this that rivetted the bird's attention. Sir Charles Back, wintering within the Arctic circle, was visited occasionally by a raven, and in the dull monotony of an Arctic winter it became a subject of great interest to the traveller and his party. It has an odd short cry when making love—a sort of chatter. It lays 4 or 5 eggs—green with grey or brown spots.

BOHEMIAN CHATTERER OR WAX WING.

It is a relief to turn from this foul bird with its gloomy associations, to one of

which nothing but good can be said. It has no place in literature because it is confined to northern regions, and is but little known. When Wilson wrote he was not aware of its existence on this continent, and he spends a good deal of time, proving that the cedar-bird of America was not the chatterer of Europe. It is one of the handsomest of all northern birds, having a well-proportioned body covered with feathers of the finest, smoothest texture. A plumage of satisfying variety, exquisite in its delicacy of color and blending of shades, it is prepared to stand a comparison with birds of more sunny climes. Its bearing is firm and its movements, as behove one so well favored, easy and graceful. The throat is somewhat full, but this is relieved by the crest which gives the bird so martial an appearance. The background or prevailing color is a fine ashy shade, and this is set off by trimmings of red, white, yellow and black. The red is confined to the extremity of six wing feathers, and although part of the true wing it has a waxy appearance from which the bird gets its alternative name of wax-wing. The black shades are chiefly about the head; while the yellow and white are on the wings and tail mostly. The eye is red. He only favors us with his presence in winter, coming from the far north with the early frosts and in small flocks of about 20 or 30. In the north he is seen in much larger numbers. He breeds on the Arctic seas and away as far north as 80°. Like all winter birds he is deprived of the gift of song, although in spring he has a low energetic note. They are heavy eaters, taking the early morning and late evening for securing their food. In Europe they are considered to presage war, but this was because of being not often seen. In Germany they are only seen about every seventh year.

SNOW BUNTING.

In point of numbers the snow bunting may be considered our most common winter bird. Although gregarious, the flocks which appear here in the depth of winter are not large. They are to be seen on the highway, where they always find abundance of food. Their feeding time is usually from nine to eleven chiefly, although they may be found feeding at all hours of the day. The bunting glories in a breeze, and flies round in it with the utmost activity and delight. Outwardly he is not so well prepared for cold as most of our other winter birds, who with their furred trousers yet hardly dare leave the milder precincts of the evergreen spruce and balsam. And yet he stands cold better than perhaps any other bird in the world. The northern limit of his breeding place so

far is the most northerly-discovered land. Although so lively on the wing he is not, when viewed more closely, so bright and happy-looking as his flight would indicate. Indeed, he is demure and pale. Where does he stay at night? In the east he has been found in holes near lime-kilns. Here he haunts old buildings, stables and granaries. They arrive here in October but it is hard to determine whether they remain or go further south and get replaced with others later on. They have been found as far south as Maryland. They travel from the pole half way to the equator. The snow bunting shares with the Lammings and Capt. Markham's party the honor of the nearest approach to the pole. Capt. Markham met this little creature when many miles out from land on the 27th of May. They are common to both continents. In Lapland they are so numerous that they are snared for the table. They lay eggs white spotted with brown. They live on grain seeds and berries. They sing well in spring and at all times their note is a pleasing one. It is grateful to the ear of the sojourner in the far north. The female is gray all over and is smaller than the male, but no two birds agree in their makings and this applies to the eggs also.

EVENING GROSBEAK.

This beautifully plumaged bird remains here all the year round. It feeds largely on the seed of the box elder (commonly called maple here), which is full of oil and this enables it to lay a layer of fat all round its body and so withstand the lowest temperature. It remains in deep swamps and shady woods all day coming out in the evening to search for food. They are very tame and come about the houses, and if encouraged will in time feed from the hand. They of course, fall a prey to the insatiate gunner. Their note is a singular one and is only heard when they come out in the evening. The female is the smallest and is paler in plumage. Feeds on maple and seeds.

PURE GROSBEAK.

This bird has a wide range, being found sometimes as far south as Pennsylvania. At St. Petersburg thousands are brought to market as food. They are not by any means so plentiful here. They feed on birch calkins and seeds of various kinds. They eat berries, high bush cranberries.

AMERICAN CROSS BILL.

This bird has a wide range, being found as far south as the 40th parallel of latitude. They frequent pine and spruce forests, extracting, by a dexterous process, the seed from the pine cores. For this their bill is peculiarly adapted. They swallow mud or a greasy clay. In captivity they acquire

parrot-like habits of mimicry, and become quite amusing. They change color each year.

THE WHITE-WINGED CROSS BILL.

is to be found here all the year, and in habits is very much like the preceding.

BLACK-CAPPED TITMOUSE, OR CHICKADEE.

This little favorite is sprightly, noisy and restless, and further south he is described as hardy. It is needless to add that here, when he stays with us over the winter. He frequents the spruce woods (for we have no pine other than jack pine here); and although not favored with the peculiar appliance of the Cross Bill, he will manage to extract the seed from the spruce cone. This bird is gregarious, and is to be found here in flocks of about eighty to a hundred. I have a pleasing recollection of such a flock. They took up their abode in some spruce-trees near a lumber camp on the Winnipeg River, and with their incessant chatter quite enlivened the dull hours of the day, when the men were at their work in the woods. Their mimic battles were sometimes noisy, like those of greater people. They use a squirrel's or woodpecker's hole for their nest, driving the latter away; but sometimes they dig a hole for themselves, and the amount of hard, continuous work it entails is for such a wee thing quite enormous, particularly as they have none of the woodpecker's appliances for this kind of labor. They usually live on larvae and insects. Their feathers are very soft and downy. Male and female are alike in color and size. The latter lays six eggs, which are white, with minute specks of red. Their flight is short, jerky and irregular.

CANADA JAY, WHISKEY JACK, OR WHISKEY TONISH (salteaux).

One of the first birds to attract the attention of a stranger is the Canada Jay, more commonly known as Whiskey Jack. Hearne, who wrote 100 years ago, says that this is a corruption of the Indian word Whiske-Tonish, and as belived among Indians who used it, and as our knowledge of it was derived from them, it is altogether likely that the statement is correct. In appearance he resembles the blue jay, the size being similar; and there is the same active air about both birds. The Canada Jay has no crest, but he has a bushy tuft on the top of his head which might be mistaken for one. His plumage is rough, his feathers heavy and unwebbed, and of a dirty ash color, the wings being darker than the body. He sometimes puffs himself out into almost a round ball, but under no circumstances does he ever look respectable. His head looks unkempt, and his feathers as if they had all been rubbed up the wrong way;

and altogether he looks a disreputable fellow, and his roguish conduct does not belie his appearance. He steals, harries and murders, and, it is to be feared, sometimes for the mere mischief of it. He will go into the wigwam of the Indian, and, standing on the edge of the kettle, abstract the food placed there to be cooked. He will stealthily follow the trapper, and slyly and cautiously help himself to the part which has just been left for his four-footed fellow denizens of the woods. He has however some redeeming social traits. As soon as the traveller in the woods has rested for his noon day meal he receives a visit from our jay, who perches himself on the lowest branches of the nearest tree. He shows by his confidence that he trusts to your sense of honor not to endanger his life. If there is anything particularly inviting exposed to view and the camp is left unguarded he helps himself to it but he usually waits until all are through and gone when he descends and helps himself. He can imitate too the notes of other birds and in captivity becomes parrot like in his efforts to reproduce peculiar sounds. He like the blue jay lays up a stock of berries in the autumn but these hords do not last long into the winter. He belongs to the Canadian Fauna and seldom is found much south of its boundaries in old provinces. Here I should think he might be found a few hundred miles further south.

THE BLUE JAY.

The blue jay is one of our most common winter birds and one or two are to be found near every dwelling house in the country, if there are woods in the neighborhood. He occasionally visits my oaks and runs very busily over them tapping here and there and no doubt picking up the little white worms that are to be found in small round

balls in that tree. He never stays long, and is quite brisk, as if in a hurry. He is said to lay up a winter store, but if so it does not last him very long or he wishes much to vary it, for he is always on the alert for food. His habits are much like his ill-favored cousin, the Canada jay, and although he presents a better appearance his character stands no higher. He steals here as elsewhere, and seems to harry a nest out of pure wantonness. His plumage is always spruce, clean and bright, and his crest gives him a sort of respectability beyond the reach of his namesake. The jay is very mischievous and glories in discovering one of the night owls abroad in daylight. He gathers all the other birds within reach and they all set upon the helpless owl until he is fairly driven away. He falls on the ground and rolls along like a ball of rags.

THE LESSER RED POLL.

Is a common winter bird and is very tame coming round houses in the city in considerable flocks. He remains all the year with us. His habits are akin to those of the summer birds of his family. He is always to be distinguished by the red feathers on his head. With this bird my list is exhausted. I do not say it is complete, but it must be nearly so. At any rate these notices will afford a basis upon which to complete the catalogue of our winter birds. I have to express my thanks to different friends for valuable information, but will only here name Mr. Hine and his son from whose ample stores of knowledge I have drawn with great freedom, and it is but right to say that all the information sought was given with the greatest readiness.

The ultimate proofs cannot have my personal revision and I must therefore crave the reader's indulgence in advance if any errors remain undetected.

